

To Prep or Not to Prep: Is Preparing Homes for Bedbug Services Necessary





Jeffrey White, respected US entomologist and Director of Innovation and Technical Content for BedBug Central, provides his take on the need (or not) for detailed room preparation in bedbug treatment. This thought-provoking article challenges the way in which the industry thinks...perhaps it is time to re-evaluate UK approaches based on experiences from this particular US perspective.

From emptying wardrobes of clothes to stripping beds of bedding, what is often required of residents to prepare their home for bedbug treatment has been a heated topic within the pest control industry for at least the past 10 years.

Getting residents to cooperate with bedbug preparation lists is often an uphill struggle that many pest control professionals blame for difficult to-eliminate infestations. These preparations are often advised to every client receiving bedbug treatment and one of the more frustrating questions for pest management professionals is as follows:

“How do we handle clients who don’t prepare the home for bedbug treatment?” In addition to bedbug prep work being a volatile topic amongst pest management professionals, it has also been the source of many arguments between residents, property management, and pest control technicians.

As the industry and experts gain more knowledge about treating bedbugs, the question now isn’t “how do I get my clients to cooperate?” but rather “do I require any of this prep work in the first place?”

Why Prep a Home? Before discussing why bedbug preparation may not be necessary in most bedbug cases, it’s important to first review why bedbug prep is often required.

Prep is often split into two groups: **Group 1:**

Standing furniture on-end for inspection and treatment, moving furniture away from walls and emptying items out from underneath beds (amongst others)

Group 2: Emptying closets and dressers of clothes and laundering them prior to treatment, as well as bagging and treating personal items that cannot be laundered. The first group is often recommended to ease the treatment process as well as access areas that may be blocked by furniture and other clutter.



The second group is recommended to treat bedbugs hiding within items that cannot be treated by pest management professionals. The reality of both of these approaches is that they require a significant amount of time to complete and many clients may not have the physical health or time available in their lives to complete the tasks in the first place.

This often leads to verbal altercations, which strains relationships between clients and pest management professionals and further complicates the elimination of bedbugs. In addition to verbal altercations, pest management professionals often blame the inability to eliminate infestations on the fact that the tenant is not cooperating.

The Harm of Prep Group 1: Don't Lose Control of the Bedbugs! When it comes to stripping beds of bedding, standing bedding up prior to a service, moving furniture away from walls and removing belongings from underneath beds and sofas, these recommendations are usually made to make the treatment process easier and faster for pest control companies. The question you need to ask yourself when making these recommendations is how residents altered the environment prior to you treating it and whether they spread bugs throughout the home by performing these tasks.

When residents strip the bed, what do they do with the bedding once it's stripped? If they stand the bed up prior to your service and expose the bugs to light, where do the bugs disperse to before you arrive to treat the home? If they empty belongings from underneath the bed, where do those belongings go and are there bedbugs now in other areas of the home that they weren't before?



Ultimately, these tasks often only require a few minutes of the pest management professional's time to complete and if the resident completed them, it may be the reason why bedbug activity seems unpredictable when you arrive.

By asking residents to perform these tasks you are losing control of the bedbugs and most experienced pest control companies would rather take the few minutes it requires to carry out these simple tasks in order to see bedbug activity in its original state. Emptying Wardrobes and Drawers

(Group 2): The 70:20:10 Rule Many experts have been recommending for quite some time that pest control professionals create a system to categories infestations at the start of a service. The thought behind this recommendation is that service protocols should change depending upon the extent of the activity. Quite simply: you shouldn't be using the same protocol for all bedbug jobs.

One example of categorizing the level of bedbug activity is as follows:

- If 20 bedbugs or fewer are found in the initial service it will be classified as a low-level problem
- If 21–100 bedbugs are found it will be classified as a moderate-level problem
- If over 100 bugs are found it will be classified as a high-level problem The numbers used to classify activity in the above example are fairly arbitrary and only intended to suggest when the dynamics of a bedbug population may change based upon the number of bedbugs being observed.



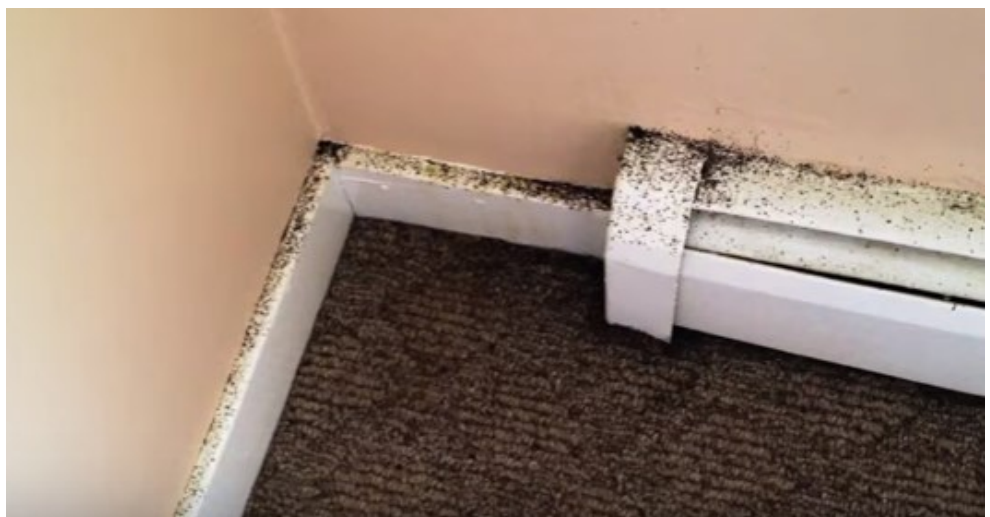


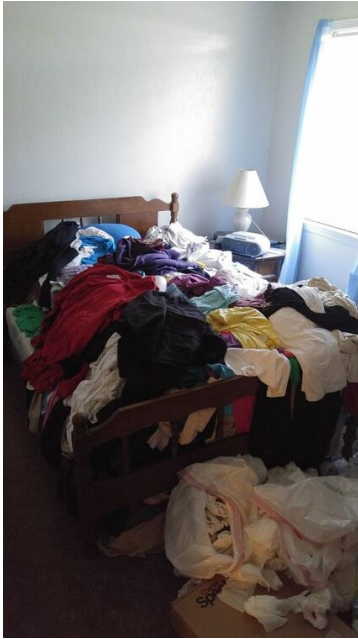
That being said, using the above numbers and categories, BedBug Central documented that within an average apartment community, 70% of what you encounter will be low-level bed-bug activity, 20% moderate-level, and 10% high-level (White, 2012).

It should be noted that the 70:20:10 rule can change by environment, as observed in the work conducted by Rutgers University in affordable/ social housing settings in New Jersey (Wang et al., 2016). In this study, slightly different levels were used and the percentage of each level was different but less than 10% of the apartment surveyed had over 100 bedbugs.

This study supports the work conducted by BedBug Central in that the majority of bedbug activity levels in most apartment communities comprise fewer than 100 bedbugs (90% are low- and moderate level infestations).

How Does the 70:20:10 Rule Impact Emptying Wardrobes and Drawers?





Bed bug preparation before and after pictures

The 70:20:10 rule provides the greatest insight into one of the most common requirements that pest control professionals ask of residents, which is to empty drawers and wardrobes and launder all of their personal belongings prior to a service. The concept behind this requirement is that if bedbugs are in clothes and other personal belongings the pest control industry cannot treat those items with pesticides.

Therefore, laundering them is the only way in which to eliminate bedbugs from these items. The reality is that bedbugs are often only found in wardrobes and drawers in cases of high-level bedbug activity (an average of 10% or less of the problems encountered). This means that in 90% or more of bedbug problems, large numbers of bugs are not found in wardrobes and drawers. This suggests that making recommendations to empty and launder the contents of those items may have little impact on the success of treatment.



Rutgers University has now put data behind the concept of 'limited/no prep' and found that in a study conducted in New Jersey, 95% of 114 bedbug cases were eliminated with no assistance from residents (Wang et al., 2014; Cooper et al., 2015a).

Try **"Prep as Needed"** Instead One of the misconceptions that many pest control companies have when considering this approach is that it is suggesting you should **NEVER** require prep. This is not true, as prep work may be required but is only done so 'as needed'. This means that if observations are made on the initial visit and bedbug activity is noted within the wardrobe in the master bedroom, the closet should be emptied and contents laundered for the first follow-up service.



If bedbugs are noted in items stored underneath the bed, those items should be cleaned by residents and should not be stored underneath the bed until the activity is eliminated. Prep should be required based upon visual

observations and where bedbug activity is noted instead of "because the bugs might be there".

How Monitors Can Help One of the concerns of companies hesitant to try the limited-prep approach to bedbug management is as follows: if there are one or two bugs in the wardrobe, how will they be eliminated if nothing is being done to the clothes in there?

Always remember: bedbugs must feed. Therefore, if bedbugs are hiding in the wardrobe you can attempt to put pesticides and devices between them and the food source in an effort to capture or kill the bugs as they move from one point to another. Of course, evidence exists which shows that treating bedbugs directly with insecticides is more effective than barrier treatments. For this reason, putting a physical device between the bugs and the food source might be preferable.



One such tool that has been found to be extremely successful in this approach is a bedbug interception device. These devices can be installed either under the legs of beds and sofas or next to the legs, and will trap the bugs as they travel around the home (pitfall devices). Research has demonstrated that

interception devices can be valuable tools as part of a bedbug management plan by capturing bedbugs over time and assisting in reducing populations (Cooper et al., 2015a; Cooper et al., 2015b). In addition to reducing populations, these monitors can provide valuable information about the direction from which bedbugs may be coming when travelling to the bed.

If bugs are being trapped primarily under one leg of a bed it suggests that bedbugs are harboring close to that leg; this information can be used to perform targeted follow-up treatments, which can also shorten the time required to eliminate a bedbug infestation. Lastly, it should be noted that the requirements asked of residents can differ by client, meaning that many of those living in social housing may be unlikely to cooperate with long bedbug prep lists, but clients in single-family homes may have a different mind-set with regard to bedbug prep work. When a client owns their home they are often willing to do whatever it takes to eliminate bedbug infestations as quickly as possible.

In this situation, while not necessary to require lengthy bedbug prep, a more involved approach may be better suited for a heavily involved homeowner. The bottom line is that a shift in mindset behind bedbug prep work is upon us and you should ask yourself not why your clients won't cooperate but whether that cooperation is even necessary (in most situations).

References

Cooper, R., Wang, C. and Singh, N. (2015a). Evaluation of a model community wide bed bug management program in affordable housing. *Pest Management vScience*, 72 (1), 45–56.

Cooper, R., Wang, C. and Singh, N. (2015b). Effects of various interventions, including mass trapping with passive pitfall traps, on low-level bed bug populations in apartments. *Journal of Economic Entomology*, 109 (2), 762–769.

Wang, C., Singh, N. and Cooper, R. (2014). What causes bed bug control failure? The resident factor. *Pest Control Technology*, 42 (3), 86–95.

Wang, C., Singh, N., Zha, C. and Cooper, R. (2016). Bed bugs: Prevalence in low-income communities, resident's reactions, and implementation of a low-cost inspection protocol. *Journal of Medical Entomology*, doi 10.1093/jme/ tjw018.

White, J. (2012). Juggling Act. *Pest Control Technology*, 40 (12), 96–104.